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NOTICE OF ALLOWANCE AND FEE(S) DUE

7590 08/27/2003

MICHAEL BEST & FRIEDRICH LLP
100 East Wisconsin Avenue
Milwaukee, WI 53202-4108

EXAMINER

BAUM, STUART F

ART UNIT

CLASS-SUBCLASS

1638

800-278000

DATE MAILED: 08/27/2003

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/530,663	07/11/2000	VINCENT LEE C. CHIANG	66040-9651	3250

TITLE OF INVENTION: A 4-COUMARATE CO-ENZYME A LIGASE PROMOTER

APPLN. TYPE	SMALL ENTITY	ISSUE FEE	PUBLICATION FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	NO	\$1300	\$0	\$1300	11/28/2003

THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. PROSECUTION ON THE MERITS IS CLOSED. THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS. THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPON PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.

THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. THIS STATUTORY PERIOD CANNOT BE EXTENDED. SEE 35 U.S.C. 151. THE ISSUE FEE DUE INDICATED ABOVE REFLECTS A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE APPLIED IN THIS APPLICATION. THE PTOL-85B (OR AN EQUIVALENT) MUST BE RETURNED WITHIN THIS PERIOD EVEN IF NO FEE IS DUE OR THE APPLICATION WILL BE REGARDED AS ABANDONED.

HOW TO REPLY TO THIS NOTICE:

I. Review the SMALL ENTITY status shown above.

If the SMALL ENTITY is shown as YES, verify your current SMALL ENTITY status:

A. If the status is the same, pay the TOTAL FEE(S) DUE shown above.

B. If the status is changed, pay the PUBLICATION FEE (if required) and twice the amount of the ISSUE FEE shown above and notify the United States Patent and Trademark Office of the change in status, or

If the SMALL ENTITY is shown as NO:

A. Pay TOTAL FEE(S) DUE shown above, or

B. If applicant claimed SMALL ENTITY status before, or is now claiming SMALL ENTITY status, check the box below and enclose the PUBLICATION FEE and 1/2 the ISSUE FEE shown above.

Applicant claims SMALL ENTITY status.
See 37 CFR 1.27.

II. PART B - FEE(S) TRANSMITTAL should be completed and returned to the United States Patent and Trademark Office (USPTO) with your ISSUE FEE and PUBLICATION FEE (if required). Even if the fee(s) have already been paid, Part B - Fee(s) Transmittal should be completed and returned. If you are charging the fee(s) to your deposit account, section "4b" of Part B - Fee(s) Transmittal should be completed and an extra copy of the form should be submitted.

III. All communications regarding this application must give the application number. Please direct all communications prior to issuance to Mail Stop ISSUE FEE unless advised to the contrary.

IMPORTANT REMINDER: Utility patents issuing on applications filed on or after Dec. 12, 1980 may require payment of maintenance fees. It is patentee's responsibility to ensure timely payment of maintenance fees when due.



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7590	08/27/2003		EXAMINER	
MICHAEL BEST & FRIEDRICH LLP 100 East Wisconsin Avenue Milwaukee, WI 53202-4108			BAUM, STUART F	
			ART UNIT	PAPER NUMBER
			1638	
			DATE MAILED: 08/27/2003	

Determination of Patent Term Extension under 35 U.S.C. 154 (b) (application filed after June 7, 1995 but prior to May 29, 2000)

The Patent Term Extension is 0 day(s). Any patent to issue from the above-identified application will include an indication of the 0 day extension on the front page.

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Extension is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) system (<http://pair.uspto.gov>).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (703) 305-1383. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at (703) 305-8283.



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Notice of Fee Increase on October 1, 2003

If a reply to a "Notice of Allowance and Fee(s) Due" is filed in the Office on or after October 1, 2003, then the amount due will be higher than that set forth in the "Notice of Allowance and Fee(s) Due" since there will be an increase in fees effective on October 1, 2003. See Revision of Patent Fees for Fiscal Year 2004; Final Rule, 68 Fed. Reg. 41532, 41533, 41534 (July 14, 2003).

The current fee schedule is accessible from (<http://www.uspto.gov/main/howtofees.htm>).

If the fee paid is the amount shown on the "Notice of Allowance and Fee(s) Due" but not the correct amount in view of the fee increase, a "Notice of Pay Balance of Issue Fee" will be mailed to applicant. In order to avoid processing delays associated with mailing of a "Notice of Pay Balance of Issue Fee," if the response to the Notice of Allowance is to be filed on or after October 1, 2003 (or mailed with a certificate of mailing on or after October 1, 2003), the issue fee paid should be the fee that is required at the time the fee is paid. If the issue fee was previously paid, and the response to the "Notice of Allowance and Fee(s) Due" includes a request to apply a previously-paid issue fee to the issue fee now due, then the difference between the issue fee amount at the time the response is filed and the previously-paid issue fee should be paid. See Manual of Patent Examining Procedure, Section 1308.01 (Eighth Edition, August 2001).

Effective October 1, 2003, 37 CFR 1.18 is amended by revising paragraphs (a) through (c) to read as set forth below.

Section 1.18 Patent post allowance (including issue) fees.

(a) Issue fee for issuing each original or reissue patent, except a design or plant patent:

By a small entity (Sec. 1.27(a))..... \$665.00
By other than a small entity..... \$1,330.00

(b) Issue fee for issuing a design patent:

By a small entity (Sec. 1.27(a))..... \$240.00
By other than a small entity..... \$480.00

(c) Issue fee for issuing a plant patent:

By a small entity (Sec. 1.27(a))..... \$320.00
By other than a small entity..... \$640.00

Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at (703) 305-8283.

Notice of Allowability	Application No.	Applicant(s)
	09/530,663	CHIANG ET AL.
	Examiner Stuart F. Baum	Art Unit 1638

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. This communication is responsive to papers filed 6/10/2003.
2. The allowed claim(s) is/are 29, 45, 46, 60, 71, 94, 101 (renumbered 1, 2, 5, 3, 4, 7, 6).
3. The drawings filed on _____ are accepted by the Examiner.
4. Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) All
 - b) Some*
 - c) None
 of the:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

5. Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
 - (a) The translation of the foreign language provisional application has been received.
6. Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application. **THIS THREE-MONTH PERIOD IS NOT EXTENDABLE**

7. A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
8. CORRECTED DRAWINGS must be submitted.
 - (a) including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) hereto or 2) to Paper No. _____.
 - (b) including changes required by the proposed drawing correction filed _____, which has been approved by the Examiner.
 - (c) including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No. _____.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet.

9. DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

<input type="checkbox"/> Notice of References Cited (PTO-892)	<input type="checkbox"/> Notice of Informal Patent Application (PTO-152)
<input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	<input type="checkbox"/> Interview Summary (PTO-413), Paper No. _____.
<input checked="" type="checkbox"/> Information Disclosure Statements (PTO-1449), Paper No. <u>6-10</u>	<input checked="" type="checkbox"/> Examiner's Amendment/Comment
<input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit of Biological Material	<input type="checkbox"/> Examiner's Statement of Reasons for Allowance
	<input type="checkbox"/> Other

Stuart F. Baum

DETAILED ACTION

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.
2. Authorization for this examiner's amendment was given in a telephone interview with Jill Fahrlander on 8/14/03.

Drawings

3. Figures 10A, 10D, 10E, and 12A-12G are objected to because no data can be discerned from the images. Correction is required.

Information Disclosure Statement

4. The information disclosure statement filed 6/10/2003 fails to comply with 37 CFR 1.97(d) because it lacks a statement as specified in 37 CFR 1.97(e). It has been placed in the application file, but the information referred to therein has not been considered.

E

Abstract

5. The following abstract has been entered:

--ABSTRACT

The present invention provides a *Populus* 4-coumarate Co-enzyme A ligase gene promoter that directs expression in the xylem of plants. The promoter is used in methods designed to alter lignin content, lignin structure, cellulose content and combinations thereof. The methods comprise operably linking said promoter to heterologous nucleic acid molecules.--

Specification

6. The first sentence of the specification has been amended:

--This application is a 371 of PCT/US98/24138 filed November 12, 1998, which [This] is
E2 a continuation-in-part of U.S. application serial number 08/969,046 filed November 12, 1997,
now U.S. Patent 6,455,762, the disclosure of which is incorporated by reference herein.--

7. IN THE CLAIMS:

Claims 1-28, 30-44, 47-55, 58, 62-63, 65-66, 72-73, 75-76, 78, 93, and 95-100 have been canceled.

E3 --Claim 29. An isolated and purified DNA molecule comprising [a DNA segment comprising a transcriptional regulatory region of a plant 4-coumarate Co-enzyme A ligase gene, wherein the transcriptional regulatory region comprises] SEQ ID NO:5.--

X --Claim 45. An expression cassette comprising the promoter sequence set forth in SEQ ID NO:5 operably linked to a coding DNA [a transcriptional regulatory region of a 4-coumarate Co-enzyme A ligase gene operably linked to a DNA segment comprising an open reading frame; wherein the transcriptional regulatory region comprises SEQ ID NO:5].--

E4 --Claim 46. A method of expressing a DNA segment in the xylem of a plant, comprising:

- (a) introducing [an] the expression cassette of claim 45 into a plant cell [comprising a transcriptional regulatory region of a 4-coumarate Co-enzyme A ligase gene operably linked to a DNA segment into cells of a plant; wherein the transcriptional regulatory region comprises SEQ ID NO:5;] and
- (b) regenerating [the plant cells to provide] a transgenic plant from the plant cell [; and]
- (c) expressing] wherein the DNA segment is expressed in the xylem of [a] the plant.--

E5 --Claim 60. The [An] expression cassette as set forth in claim 45, wherein the [open reading frame comprises the] coding DNA is from a 4-coumarate Co-enzyme A ligase gene [or another gene].--

E6 --Claim 71. A recombinant polynucleotide comprising a promoter comprising [sequence as shown in] SEQ ID NO:5 [, wherein SEQ ID NO:5 is characterized by having promoter activity].--

E7 --Claim 94. A transgenic plant [transformed] produced by the method of claim 46.--

b --Claim 101. The method of claim 46, wherein expression of the DNA segment in the xylem of the plant results in [the xylem-specific gene expression allows for the engineering of] agronomically desirable plant traits selected from the group consisting of altered lignin content, increased or decreased coniferyl and sinapyl alcohol units in the lignin structure, altered cellulose content, altered growth or altered cellulose content and combinations thereof.

E8
8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stuart F. Baum whose telephone number is 703-305-6997. The examiner can normally be reached on M-F 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amy Nelson can be reached on 703-306-3218. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0196.

Stuart F. Baum Ph.D.

August 19, 2003

Amy Nel
AMY J. NELSON, PH.D.
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1600

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